



# Building a Weather Ready RGV

One Person, One Family, One  
Neighborhood at a Time

Barry S. Goldsmith

Warning Coordination Meteorologist

National Weather Service Brownsville/Rio Grande Valley

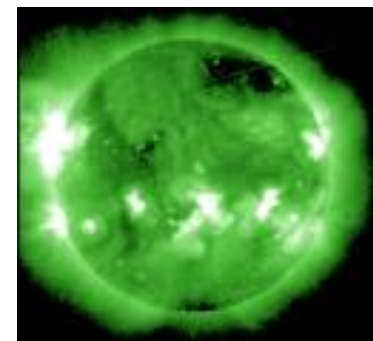
<http://weather.gov/rgv>





# Increasing Vulnerability

Becoming a **Weather-Ready Nation** is about building community resilience in the face of increasing vulnerability to extreme weather.



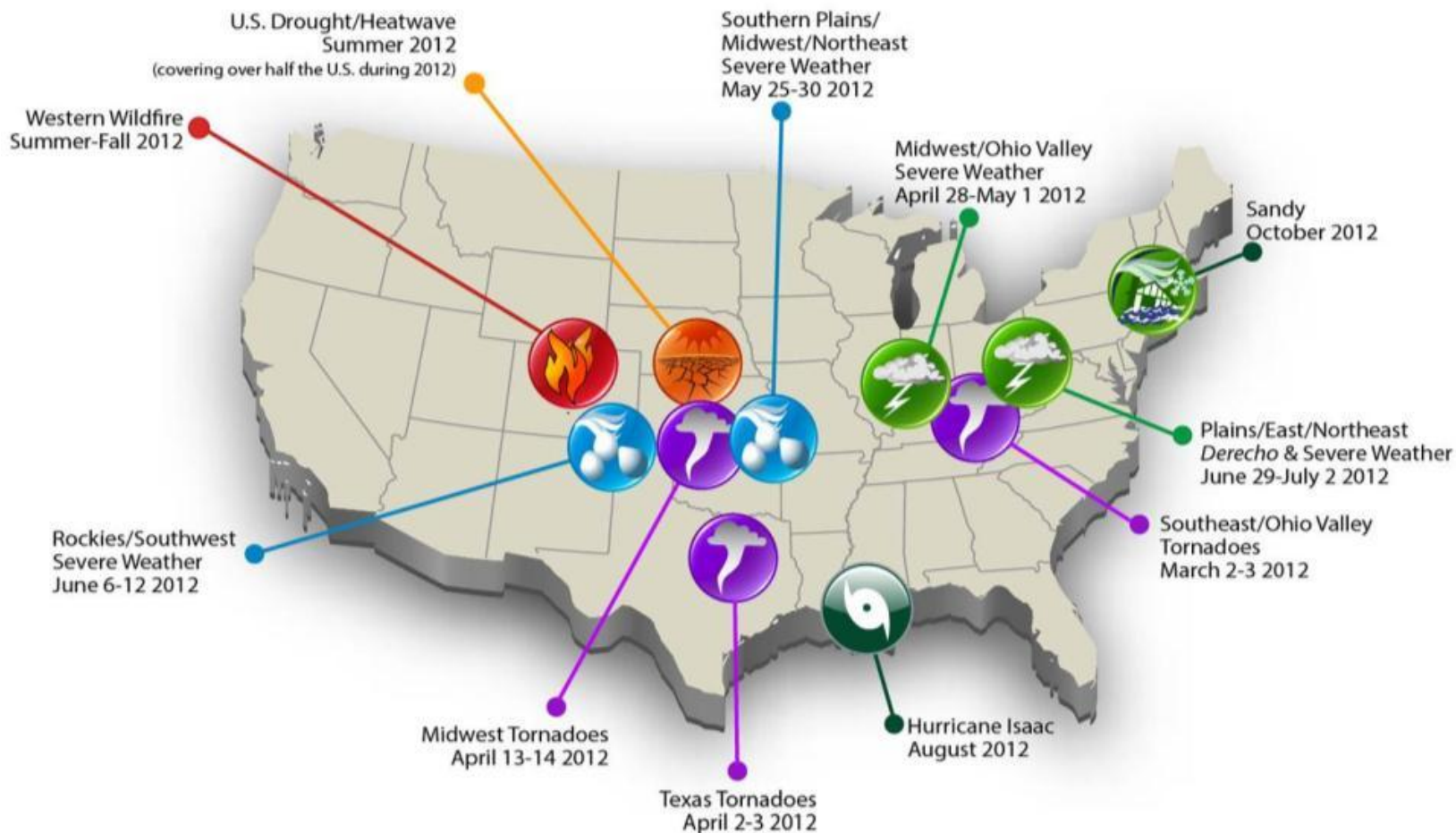


# The Many (\$Billion) Disasters of 2011





# \$Billion Disasters in 2012





# In 2013

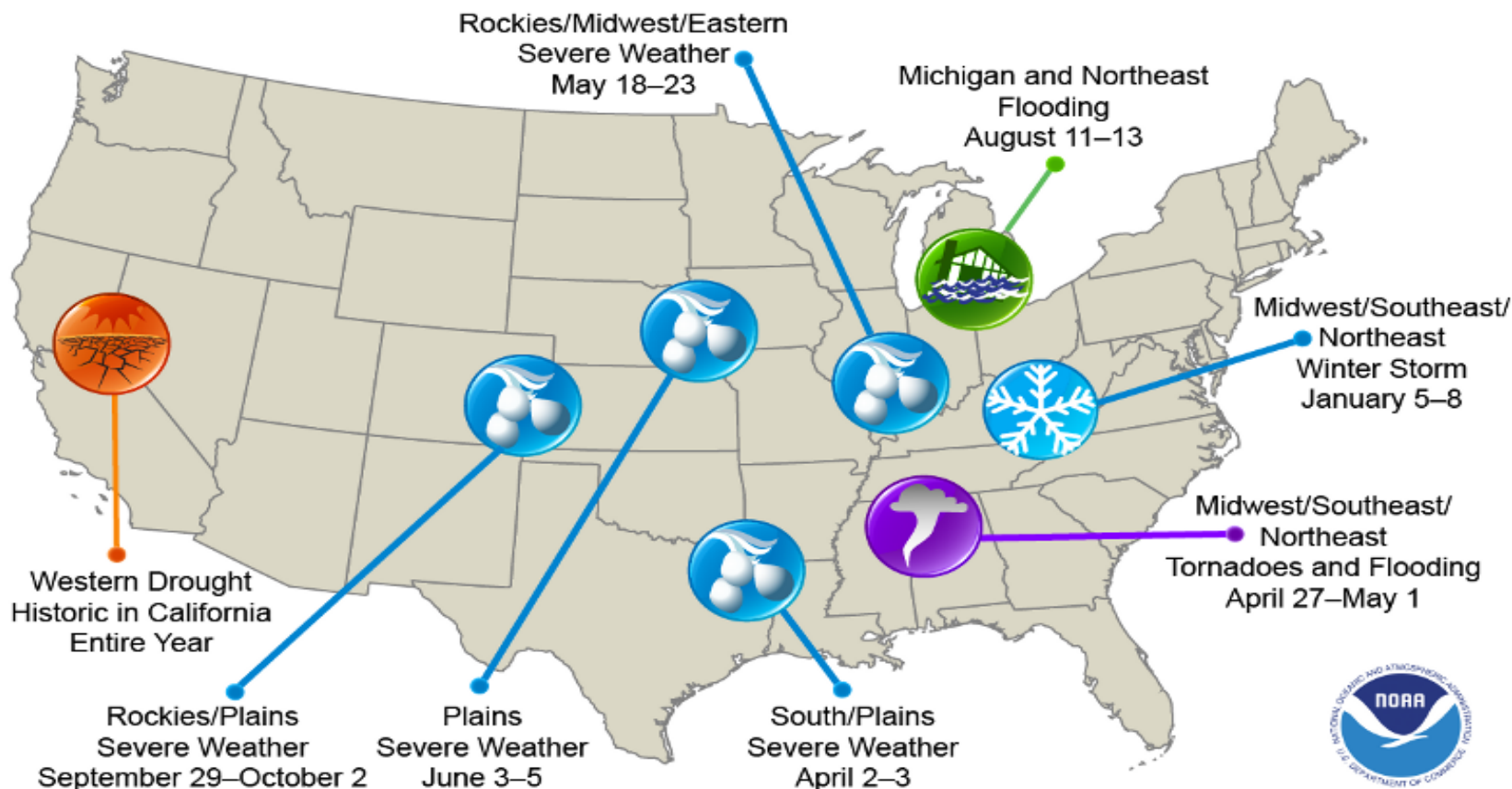
## U.S. 2013 Billion-dollar Weather and Climate Disasters





# In 2014

## U.S. 2014 Billion-Dollar Weather and Climate Disasters



*This map denotes the approximate location for each of the eight billion-dollar weather and climate disasters that impacted the United States during 2014.*

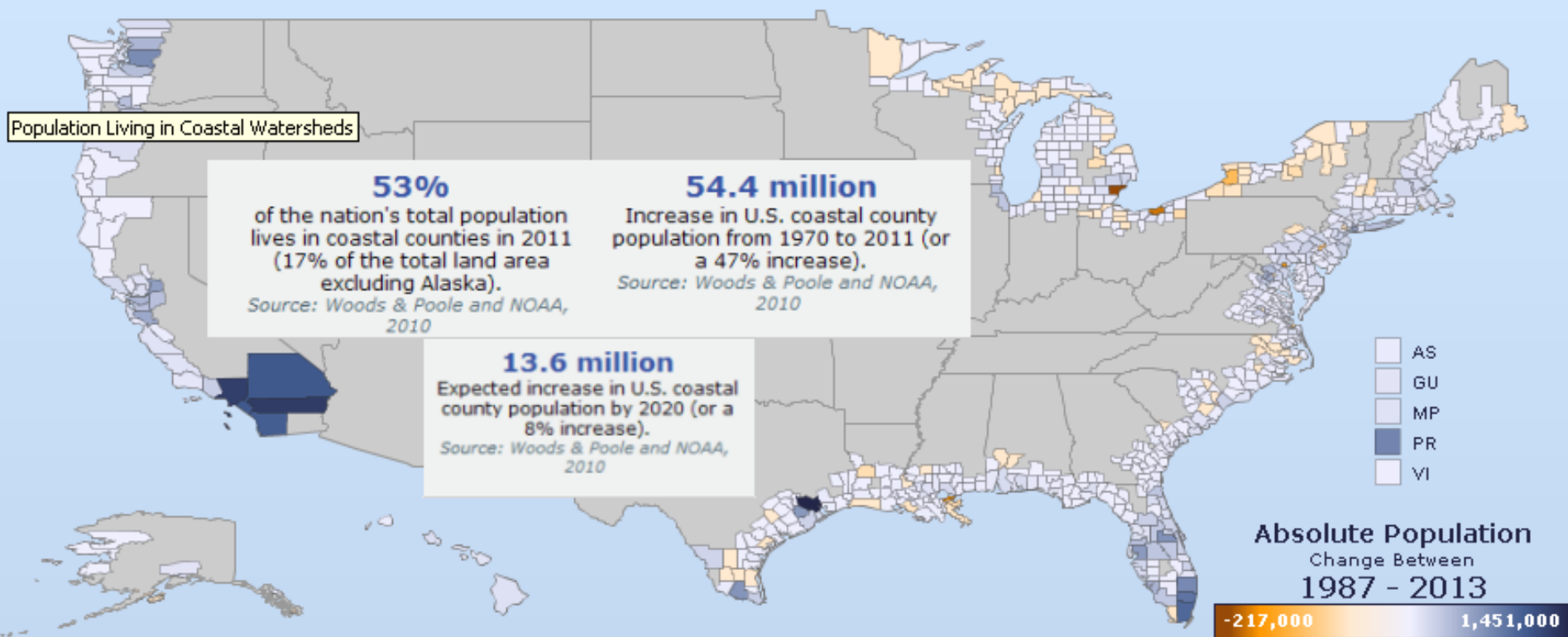
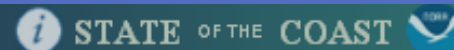


## Weather-Ready Nation



# A Changing World

## Population Living in Coastal Watershed Counties, 1970 – 2030

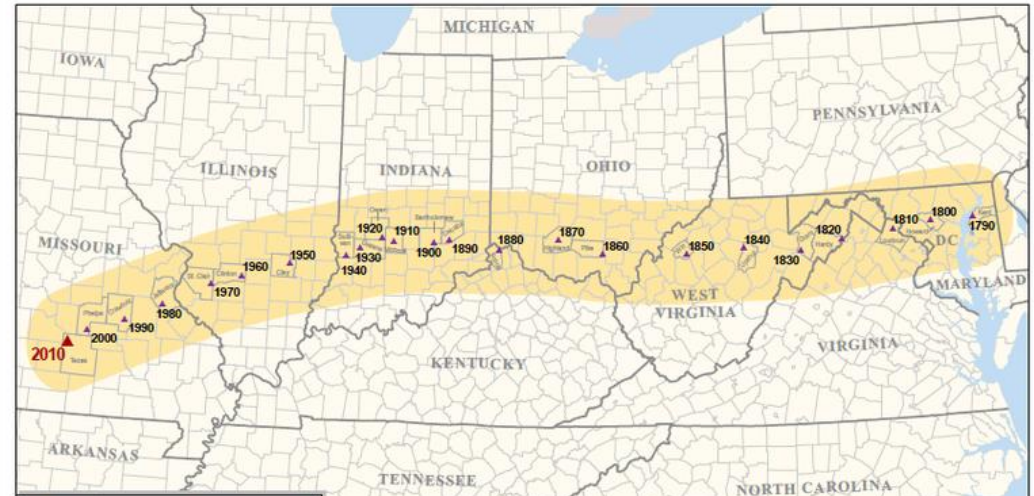




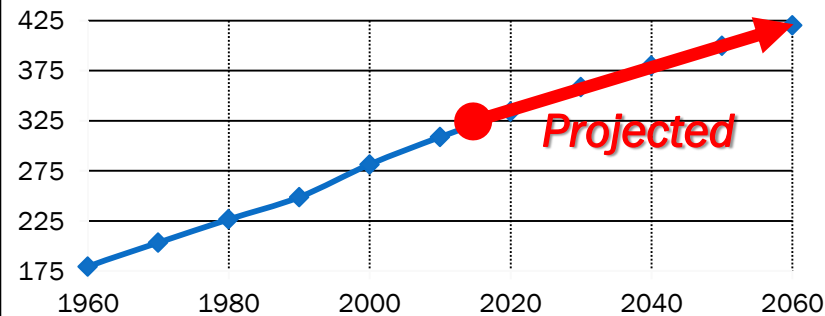
# A Changing World



Mean Center of Population for the United States: 1790 to 2010



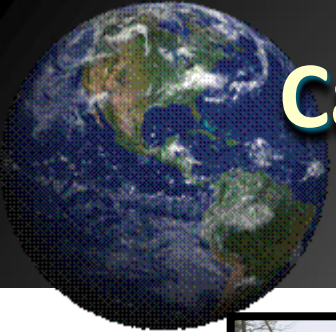
U.S. Population (millions)



▲ 2010 Mean Center of Population  
Located near Plato, MO  
▲ Mean Center of Population  
County of Center of Population  
— State or State Equivalent  
— County or County Equivalent

0 50 100 Kilometers  
0 50 100 Miles

Prepared by the Geography Division



# Case for Change: Why Weather Ready?

## *"Average" Year and Trends in the U.S.*



**650 Deaths**  
**\$15B in Losses**



**26,000 Severe**  
**Thunderstorms**



**6 Atlantic Basin**  
**Hurricanes**



**1,300 Tornadoes**



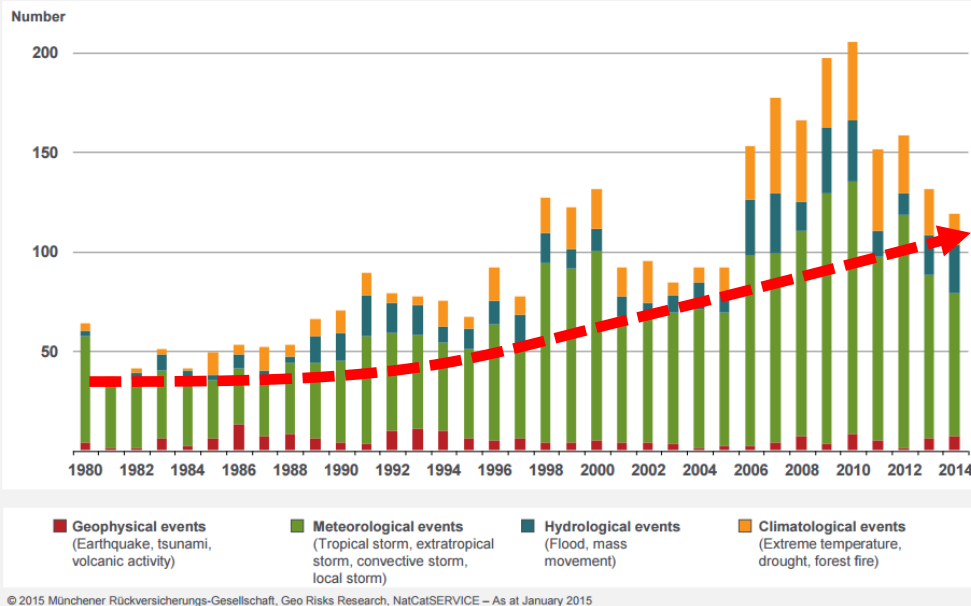
**5,000 Floods**

NatCatSERVICE

Loss events in the U.S. 1980 – 2014

Number of events

Munich RE



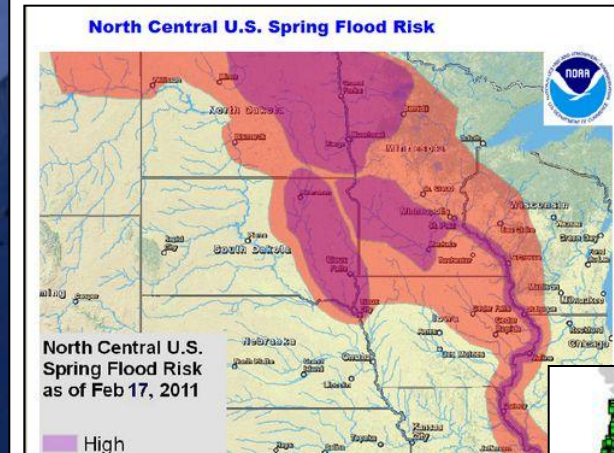
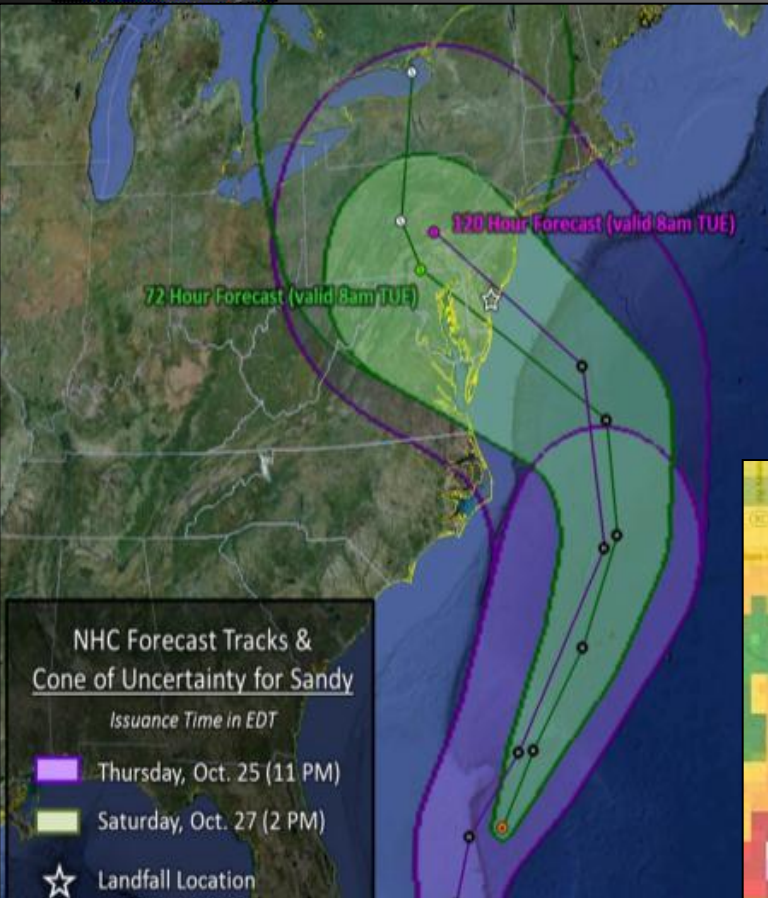
**Regardless of the cause, the trend shows an increasing number of extreme weather events at increasing cost to the nation.**

(Image source: 2014 Natural Catastrophes Review USA by Munich Re, January 2015)

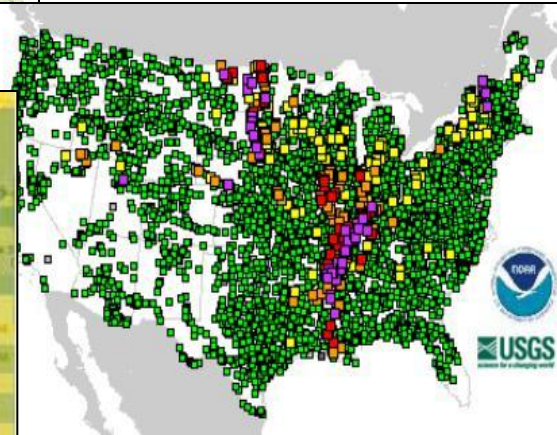
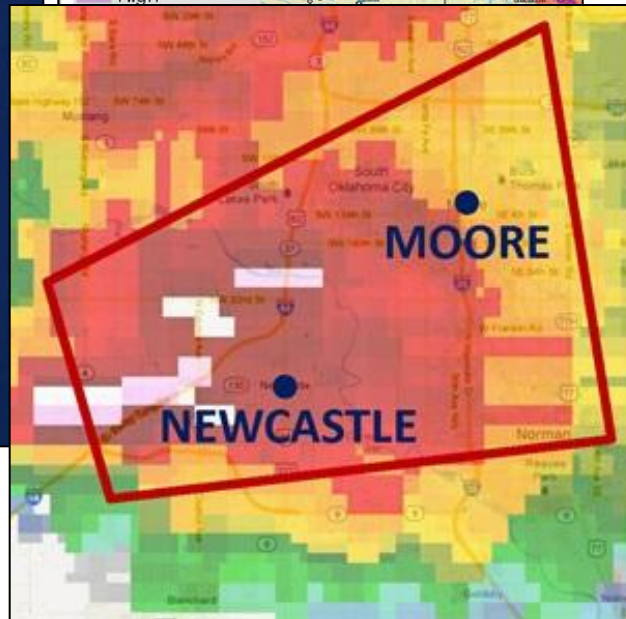


# Case for Change: Why Weather Ready?

## *Extreme events well forecast...but societal impacts?*



Flood Outlook months in advance of historical 2011 flooding



May 2013 Moore, OK Tornado ~16 minutes before formation (36 min. before arriving in Moore)

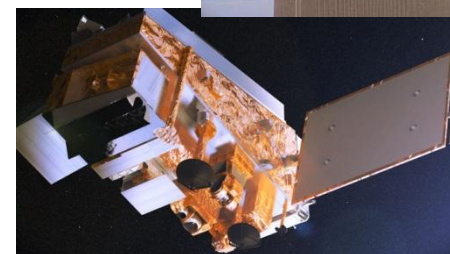
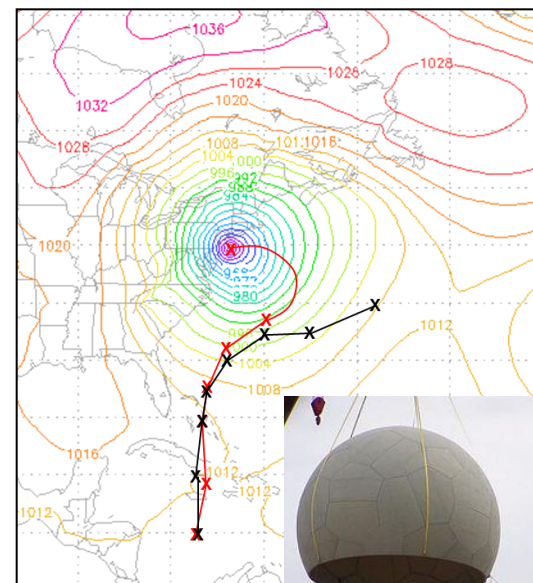




# Your National Weather Service

To achieve far-reaching national preparedness for climate, water, and weather events, NOAA is:





-  Developing new decision support services
-  Improving technology to track and forecast storms
-  **Expanding dissemination efforts**



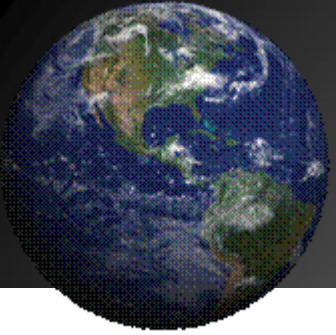


# Building a Weather-Ready Nation: “A Vital Conversation”

Norman, OK workshop – December, 2011

-  Integrate social and physical sciences
-  Delivery of warnings - focus on the “last mile”
-  Assess and update warning dissemination strategy
-  **Improve outreach and education**





# NWS Strategic Outcome: A Weather-Ready Nation

Becoming a Weather-Ready Nation is about building community resilience in the face of increasing vulnerability to extreme weather.



NOAA is developing new decision support services, improving technology to track and forecast storms, and expanding its dissemination efforts to achieve far-reaching national preparedness for weather events.

***Decreasing Vulnerability by Increasing Resilience***

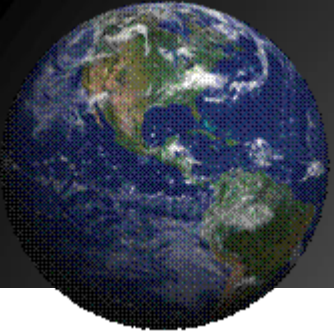


# Decision Support Services

The NWS is focused on providing **Impact-based Decision Support Services** to core partners

**Outcome:** Communities are better prepared and more resilient





# Taking NWS to the Next Level

## *Impact-based Decision Support Services*

### Recent Successes:

- ✓ **Impact-based Warning Demonstration (2012-current)**
  - ✓ Experimental in Central Region
- ✓ **National Scout Jamboree (July 2013)**
- ✓ **Pilot Projects (4 WFOs, 2 Ops Centers)**
  - ✓ Emergency Response Specialists
  - ✓ Building relationships
- ✓ **Oklahoma tornado events (May 2013)**
  - ✓ Webinar and other partner outreach morning of Moore event
  - ✓ Supporting recovery efforts with continued severe weather threats



“The information you and the weather service provided us ultimately saved more lives than we could ever count.”

--Shane Cohea, Moore Medical Center



# Emergency Response Specialists

**Emergency Response Specialists** provide 24x7 remote and on-site support to community decision makers before, during, and after a disaster



**Weather-Ready Nation**



# Impacts Catalog

A national **Impacts Catalog** is being compiled, which documents societal impacts of weather and critical decision thresholds for community leaders





# A Page out of the Impacts Catalog

User	Threshold	Potential Impact
Traveling Circus	40 mph	Tent Tie Down Improvement
Bridge Operator	50 mph	Vehicle Control
Airshow Organizer	35 mph	Stunt Flying Danger Begins
Homeowner	30 mph	Trashcan, Lawn Furniture Flips Over
Kiteboarder	12-18 mph	Anything less=no go, anything more=dangerous



**Wind  
Speed  
Decision  
Points**



# National Preparedness & Response

The NWS is integrating into the **National Preparedness System** and **National Response Framework**

*Includes participation in interagency exercises*



## National Response Framework

*Second Edition  
May 2013*



**Weather-Ready Nation**



# Keys to Successful Decision Support

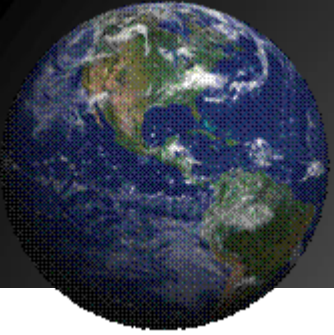
- Having a full understanding of **societal impacts**
- Making information **relevant** to decision makers
- Working with community leaders, other agencies, and America's Weather Enterprise as **force multipliers**

## Strategic Outcome:

### A Weather-Ready Nation

- *Ready*
- *Responsive*
- *Resilient*





# Taking NWS to the Next Level

## *Pilot Projects: Building Relationships*

- ✓ Many agencies are not aware of the information and services NWS provides
- ✓ All agencies have severe weather operations plans and must protect employees and facilities
- ✓ Participation in meetings, interagency exercises, and drills is critical...can't just sweep in during an event
- ✓ Goal is to make NWS interaction part of the standard operating procedures of core partner agencies
- ✓ **More than just yours truly...an entire operations staff!**





# Taking NWS to the Next Level

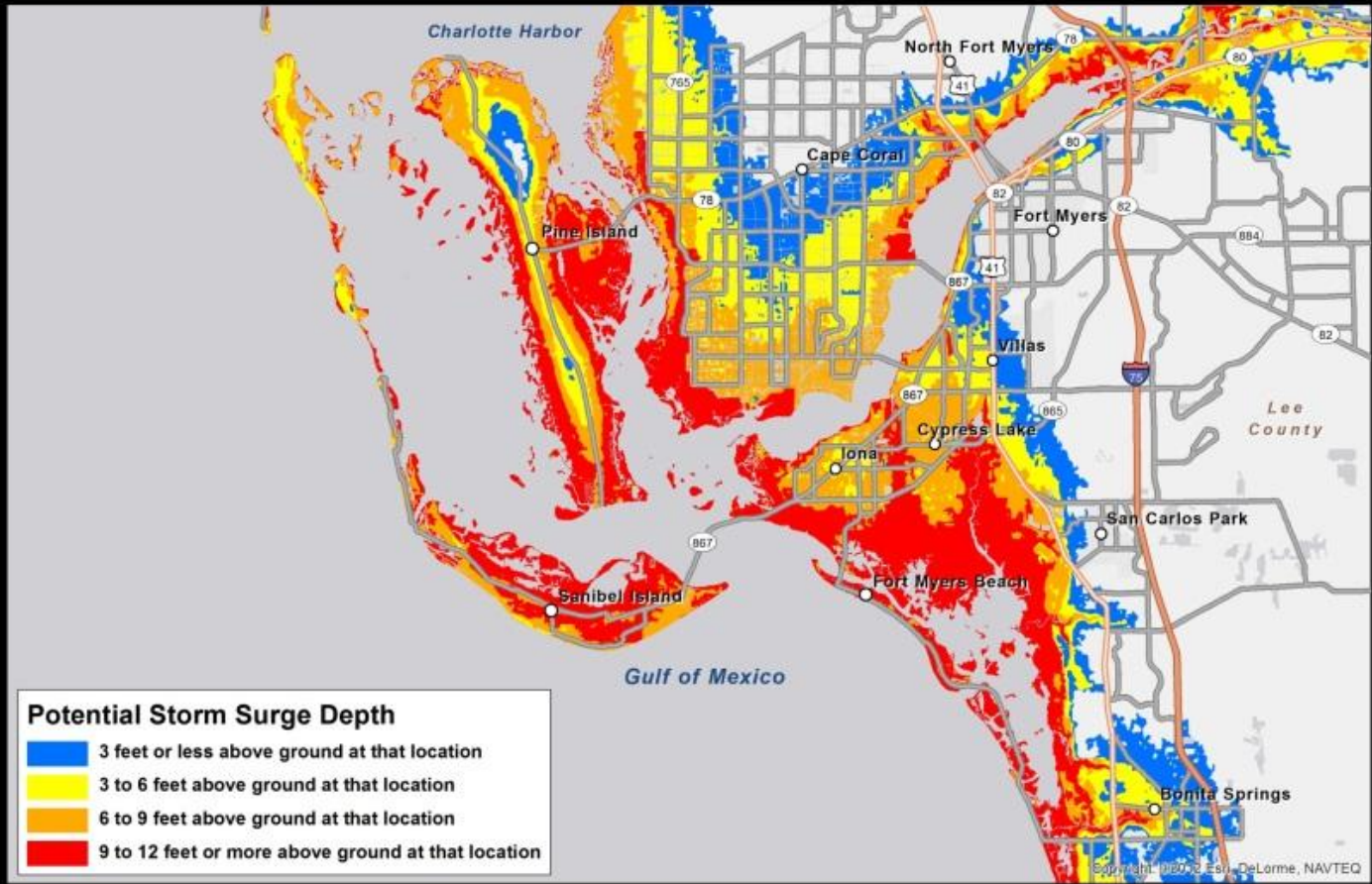
## Science/Technology Advances...Social Science

### Winter Hazards Simplification



Confused by winter weather **watches, warnings & advisories?**

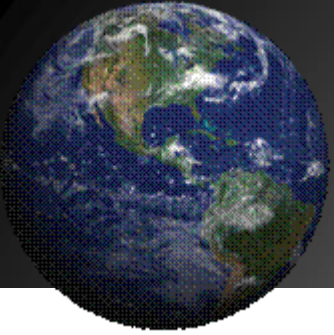
Click here to help NWS simplify our products.



National Hurricane Center  
Storm Surge Unit



National Weather Service



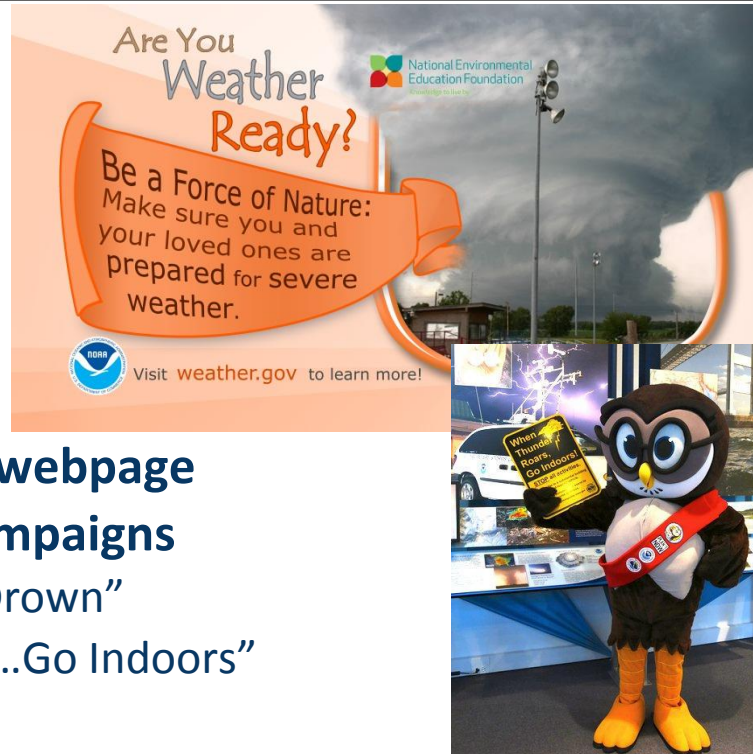
# Taking NWS to the Next Level

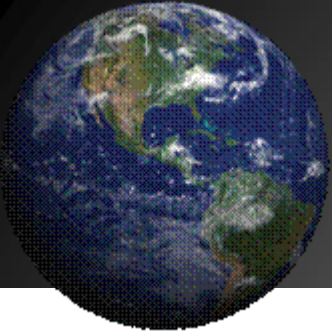
## *Outreach to Public*

**Action-oriented**  
**Consistent messaging**  
**Vulnerable populations**

### Recent successes:

- ✓ Weather-Ready Nation webpage
- ✓ Greater exposure of campaigns
  - ✓ “Turn Around...Don’t Drown”
  - ✓ “When Thunder Roars...Go Indoors”
  - ✓ “Be a Force of Nature”
- ✓ National Severe Weather Preparedness Week
- ✓ Brickyard 400 Public Service Announcement
- ✓ National Preparedness Month/“PrepareAthon”





# Taking NWS to the Next Level

## Information Delivery

Deliver through multiple channels...

- ✔ Social Media
- ✔ Wireless Emergency Alerts
- ✔ interactiveNWS (iNWS)



NOAA Social Media



NOAA Youtube



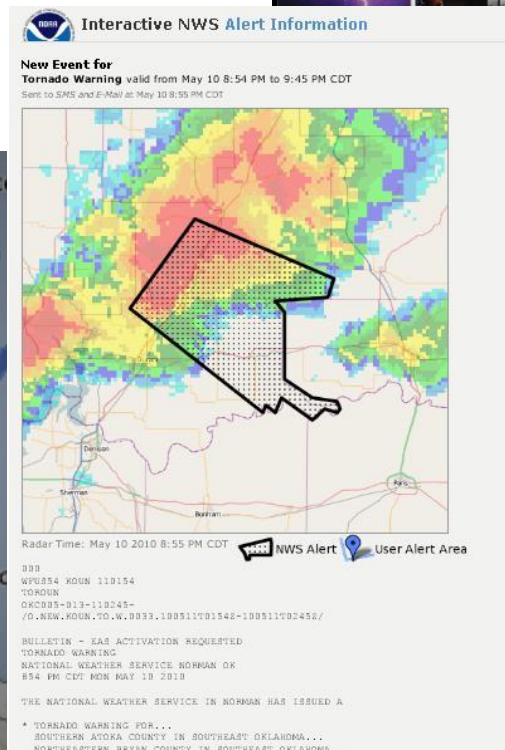
NOAA's Facebook



NOAA Twitter Feed



NWS Facebook





# How To Get Involved

StormReady® and TsunamiReady™ help community leaders, emergency managers, and first responders strengthen their community preparedness, plans, education, and awareness.



**Weather-Ready Nation**



# WRN Ambassadors Initiative

- ☑ We need partners' help in transforming society to become ready, responsive and resilient to increasing extreme weather threats.
- ☑ A Weather-Ready Nation requires our entire society to improve the way it incorporates weather information into decision making.



• **SOCIETAL RESPONSE EQUAL TO RISK** •



# WRN Ambassadors Initiative

## ✓ Resilience as high priority

- ✓ Preparedness
- ✓ Responsiveness
- ✓ Mitigation

## ✓ Innovative partnerships

- ✓ Reinvigorate existing relationships
- ✓ Create new relationships

## ✓ Consistent messaging

- ✓ More effective communication with public
- ✓ Rising above the “noise” of daily life



**PEOPLE • PARTNERSHIPS • DIALOGUE**



**Weather-Ready Nation**



# WRN Ambassadors Initiative

What it takes to be a WRN Ambassador:

- ☑ Be an example
- ☑ Promote Weather-Ready Nation messages
- ☑ Provide incentives to constituents, stakeholders
- ☑ Start with your staff and families
- ☑ Share your success stories

**READY • RESPONSIVE • RESILIENT**

# WRN Ambassadors: What's Next for the RGV

## POINTS OF LIGHT



1990: President Bush establishes the Daily Point of Light Award for individuals making a difference. During his administration, President Bush formally recognizes more than 1,000 volunteers as "points of light." He advocates that "points of light" demonstrate how "**a neighbor can help a neighbor.**" The award is now administered by Points of Light.



# WRN Ambassadors:

## What's Next for the RGV

- So Far...
  - Cities of
    - Weslaco
    - Brownsville
    - South Padre Island
  - County of
    - Hidalgo
  - Lower RGV Development Council
  - S. Texas American Red Cross
  - TCEQ Harlingen Office
- **Much Room to Grow!! Join Today**



# WRN Ambassadors: What's Next for the RGV

[About Us](#)[Blog](#)[News](#)[Partnership](#)[Programs](#)[Videos](#)

**FLASH**  
FEDERAL ALLIANCE FOR SAFE HOMES

Strengthening Homes & Safeguarding Families



GREAT HURRICANE  
BLOWOUT.ORG



@GHBlowout - Loading...

[Protect Your Home](#)[Prepare Your Family](#)[Serve Your Community](#)[Roof Sweepstakes](#)[Kids Zone](#)[About Us](#)[Sponsors](#)

## Join the Blowout

Get your home and your family  
hurricane-season ready!

[ABOUT US](#)

PROTECT **YOUR**  
HOME IN A FLASH

[GET STARTED NOW](#)

**BASF** RESILIENT ROOF  
UPGRADE SWEEPSTAKES

[ENTER TO WIN](#)

### Protect Your **Home**

There are many things you and your family can do to get your home ready for hurricane season today... before the first hurricane arrives....

### Prepare Your **Family**

If and when a hurricane does head your way, having a plan in place can eliminate family stress.

### Serve Your **Community**

You and your family are now prepared to confront a hurricane, so it's time to think about how you can help your community.

**Weather-Ready Nation**

National Oceanic and Atmospheric Administration



# WRN Ambassadors: What's Next for the RGV

[About Us](#)[Blog](#)[News](#)[Partnership](#)[Programs](#)[Videos](#)

**FLASH**  
FEDERAL ALLIANCE FOR SAFE HOMES

Strengthening Homes & Safeguarding Families

## SERVE **YOUR** COMMUNITY

You and your family are now prepared to confront a hurricane, so it's time to think about how you can help your community.

Recovery efforts from all natural disasters, including hurricanes, depend on the support of everyday people just like you who step up to help rebuild a community.

From Hurricane Katrina to the tornadoes in Tuscaloosa and Joplin, trained volunteers in post-disaster situations have the satisfaction of knowing that they are helping their community when it needs it most. They also gain a positive experience that they draw on for years to come:

**Affiliate yourself** with a local non-profit volunteer organization and train to help in post-disaster situations

**Pledge to build** 72-hour hurricane emergency kits for neighbors in need

Use the Outreach Toolkit to bring the Great Hurricane Blowout to your town and help other families in your community learn how they can get ready for hurricane season



**Weather-Ready Nation**  
National Oceanic and Atmospheric Administration



**Call toll free: 1-888-379-9531 or have us call you**



## Flood After Fire



# WRN Ambassadors:

## What's Next for the RGV

### Storm Surge Inundation (SLOSH Maximum of Maximums)

This web map displays a seamless national map of near worst case storm surge flooding (inundation) scenarios using the National Weather Service (NWS) SLOSH model maximum of maximums (MOMs) product for different hurricane wind categories at a high tide



Category 1

Category 2

Category 3

Category 4

Category 5

#### Category 4 Storm Surge Inundation (SLOSH Maximum of Maximums)

With this education and awareness tool, anyone living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts can now evaluate their own unique risk to storm surge. This map makes it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending several

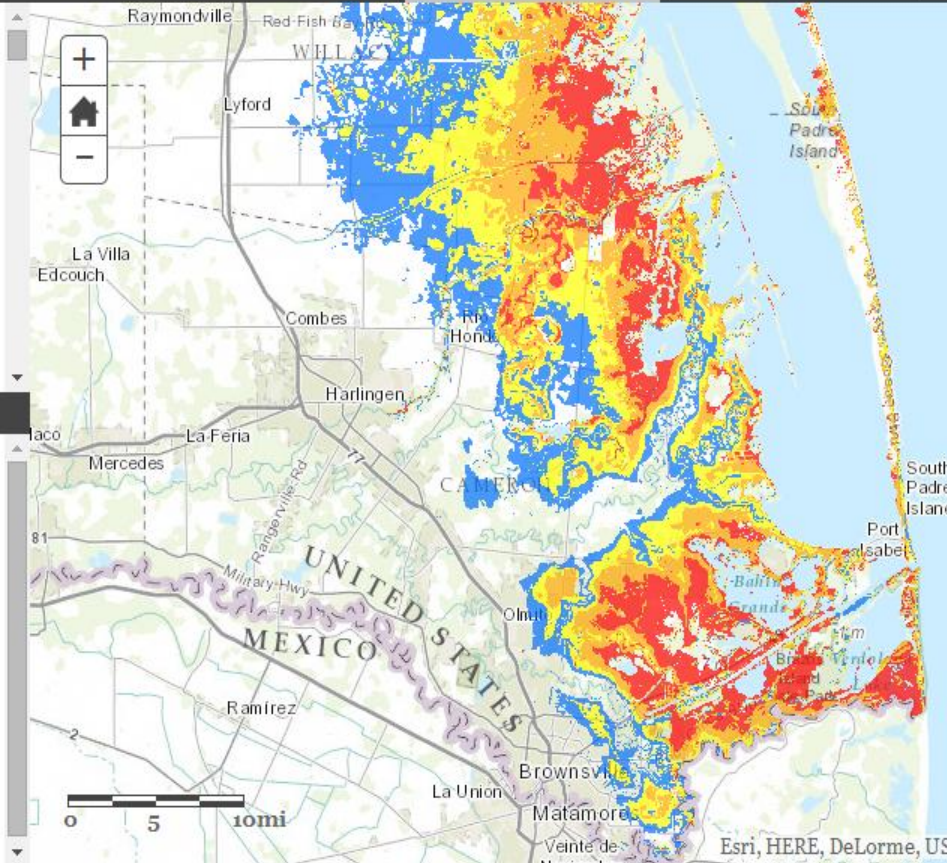
#### LEGEND

#### Category 4 (SLOSH MOMs) Storm Surge Inundation

##### Inundation Depth

- Up to 3 feet above ground
- Greater than 3 feet above ground
- Greater than 6 feet above ground
- Greater than 9 feet above ground

Levee Areas - Consult Local Officials For Flood Risk



**Zoomable Map  
Soon to be hosted at  
<http://hurricanes.gov>**

**\*NOTE: Substitute  
“Size and Strength”  
for “Category” When  
Explaining**

Esri, HERE, DeLorme, USGS, NGA, USDA, EPA, NPS | Data processed ...



# Putting Weather-Ready to Work

- More than the “routine” community meetings on preparedness
- Train community leaders to become their own experts
- Use tools, including
  - <http://flash.org> (structure resiliency)
  - <http://floodsmart.gov> (Freshwater flooding and resilience)
  - <http://www.nhc.noaa.gov/experimental/inundation/#examples> (Water above ground from storm surge)

# Putting Weather-Ready to Work

- Who are the leaders? Trusted Sources!
- They're Right in Front of Us
  - Mothers, Fathers, Sisters, Brothers, etc.
  - Best Friends/Confidantes
  - Church Leaders, Lay-Leaders, Parishioners
  - Teachers
- But They're probably not you or me
  - Unless we've built a personal relationship (family, neighbor, friend, belong to same church/club/organization, etc.)

# Putting Weather-Ready to Work

*Celebrating Our Past*



AN EARLY COLLEGE DISTRICT

# BROWNSVILLE

INDEPENDENT SCHOOL DISTRICT

1915 - 2015

*Building Our Future*



# HCISD

Parent Portal Calendar Lunch Menu Webmail

HARLINGEN CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

407 N. 77 Sunshine Strip Harlingen, TX 78550 | Phone (956) 430-9500 | Fax (956) 430-9507



# MC<sup>+</sup>ALLEN

INDEPENDENT SCHOOL DISTRICT

## The University of Texas Rio Grande Valley

## Interest the Students, Interest the Parents!



# Putting Weather-Ready to Work

## COLONIAS PROGRAM



- [about](#)
- [our regions](#)
- [what we do](#)
- [region updates](#)
- [news](#)
- [contact us](#)
- [calendar](#)



Hurricane Season is here!  
Are you prepared?



# Putting Weather-Ready to Work



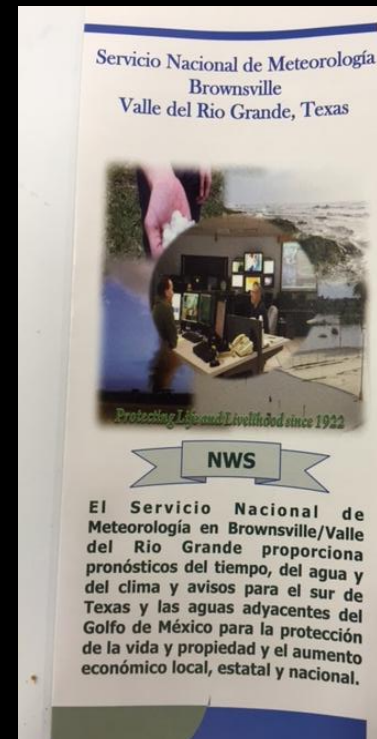
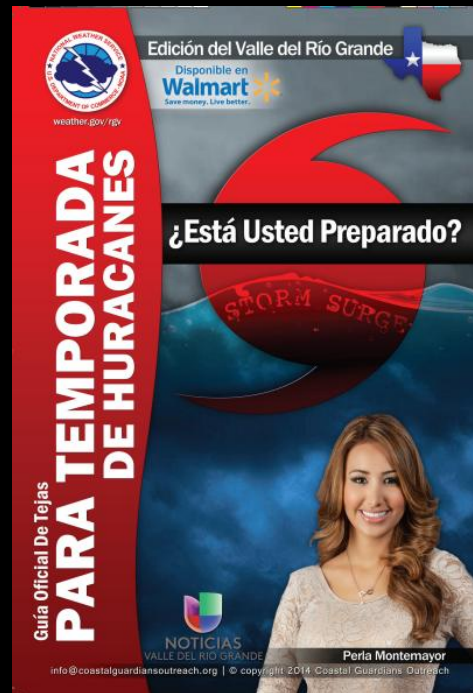
## Cultural Concerns



Hurricane Season is here!  
Are you prepared?



La Radio del Tiempo de la  
NOAA, **En Español**, para el  
Valle de Río Grande!



# Putting Weather-Ready to Work



**CATHOLIC DIOCESE OF BROWNSVILLE**

*Serving the faithful of the Rio Grande Valley*

**SAN JUAN del VALLE**  
*National Shrine*  
BASILICA OF OUR LADY OF



+

**FAITH PLEASES GOD**  
**CHURCH**

...And Many  
Others,  
Small and  
Large!



**Weather-Ready Nation**

National Oceanic and Atmospheric Administration



# Putting Weather-Ready to Work

- Why Does Religion Matter? (from Brown, et. al, 2009)

An illustration of “weathering the storm” was encountered while conducting field research in New Orleans in 2009. I interviewed the Director of Homeland Security and Office of Emergency Preparedness for Plaquemines Parish, Jesse St. Amant, who was one of the first to call for evacuation in the area. He told me a story of a senior couple that was adamant about not “evacuating” (his term), but rather not “abandoning” (their term) their home in anticipation of the imminent arrival of Hurricane Katrina. He pleaded with them to leave as soon as possible. **They explained that they had survived other hurricanes that preceded Katrina, and if God was willing, they would also survive Katrina.** St. Amant said that he reluctantly left the couple in their home. When he and his team re-entered Plaquemines Parish after the storm, he found the same couple two doors down from their house, deceased.

Although the sentiments of the couple may sound irrational to some, **many people contemplate the possibility that a natural event could be their God reaching out to them, calling them home.** And for them, given their belief in a post-death celestial home, there is no other place they would rather be than their earthly home in **serene preparation for the final journey to their home in paradise.** The decision to accept God’s call transcends fear or the petty thought of impending disaster! Indeed, what Hurricane Katrina did and other natural “calamities” do is **invite persons to ponder the meaning of life and the pivotal question of a community’s relationship with its creator.**





# It's All About Partnerships



**Weather-Ready Nation**



# Questions?



**@NWSBrownsville**

Contact Info:

Barry S. Goldsmith

Warning Coordination Meteorologist

National Weather Service Brownsville/Rio Grande Valley

[barry.goldsmith@noaa.gov](mailto:barry.goldsmith@noaa.gov)

956-572-1492

<http://weather.gov/rgv>

